

2014 Consumer Confidence Report

Water System Name: Milton Road Water Company Report Date: November 22, 2015

We test the drinking water quality for many constituents as required by state and federal regulations. This report shows the results of our monitoring for the period of January 1 - December 31, 2014 and may include earlier monitoring data.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo ó hable con alguien que lo entienda bien.

Type of water source(s) in use: groundwater wells

Name & general location of source(s): well #1, 1346 Milton Road, Napa, CA (Jan-Oct 2014)
Lagorio well, 1331 Milton Road, Napa, CA (Nov-Dec 2014)

Drinking Water Source Assessment information: An assessment of the MRWC well #1 was completed in March of 2002. The well was considered most vulnerable to confirmed leaking underground storage tanks. A copy of the complete assessment is available from the Napa County Department of Environmental Management. There has been no assessment performed on the well at 1331 Milton Road.

Time and place of regularly scheduled board meetings for public participation: Annual meetings are held the first Sunday in October.

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TERMS USED IN THIS REPORT

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency (USEPA).

Public Health Goal (PHG): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Primary Drinking Water Standards (PDWS): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

Secondary Drinking Water Standards (SDWS): MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

Regulatory Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Variances and Exemptions: State Board permission to exceed an MCL or not comply with a treatment technique under certain conditions.

ND: not detectable at testing limit

ppm: parts per million or milligrams per liter (mg/L)

ppb: parts per billion or micrograms per liter (µg/L)

ppt: parts per trillion or nanograms per liter (ng/L)

ppq: parts per quadrillion or picogram per liter (pg/L)

pCi/L: picocuries per liter (a measure of radiation)

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring

minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- *Microbial contaminants*, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- *Inorganic contaminants*, such as salts and metals, that can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- *Pesticides and herbicides*, that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- *Organic chemical contaminants*, including synthetic and volatile organic chemicals, that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.
- *Radioactive contaminants*, that can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the USEPA and the State Water Resources Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. State Board regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

Tables 1, 2, 3, 4, 5, 7, and 8 list all of the drinking water contaminants that were detected during the most recent sampling for the constituent. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The State Board allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though representative of the water quality, are more than one year old.

TABLE 1 – SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA

Microbiological Contaminants (complete if bacteria detected)	Highest No. of Detections	No. of months in violation	MCL	MCLG	Typical Source of Bacteria
Total Coliform Bacteria	(In a mo.)	1	More than 1 sample in a month with a detection	0	Naturally present in the environment
Fecal Coliform or <i>E. coli</i>	(In the year)	0	A routine sample and a repeat sample detect total coliform and either sample also detects fecal coliform or <i>E. coli</i>	0	Human and animal fecal waste

TABLE 2 – SAMPLING RESULTS SHOWING THE DETECTION OF LEAD AND COPPER

Lead and Copper (complete if lead or copper detected in the last sample set)	Sample Date	No. of samples collected	90 th percentile level detected	No. sites exceeding AL	AL	PHG	Typical Source of Contaminant
Lead (ppb) (sampled in homes)	6/26/13	4	2.02	0	15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm) (sampled in homes)	6/26/13	4	0.112	0	1.3	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

TABLE 3 – SAMPLING RESULTS FOR SODIUM AND HARDNESS

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant	
Sodium (ppm)	1346 1331	10/15/12 10/14/14	250 370		none	none	Salt present in the water and is generally naturally occurring
Hardness (ppm)	1346 1331	10/15/12 10/14/14	920 640		none	none	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually

					naturally occurring
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*Any violation of an MCL or AL is asterisked. Additional information regarding the violation is provided later in this report.

TABLE 4 – DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
Gross alpha (pCi/L) 1346 1331	12/31/13 10/14/14	4.30 3.04		15.0		Erosion of natural deposits
Radium 228 (pCi/L) 1346 1331	10/15/12	0.47 1.77		5.00	0.019	Erosion of natural deposits
Arsenic (ppb) 1346 1331	10/15/12 10/14/14	5.3 3.0		10.0	0.004	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Barium (ppm) 1346 1331	09/30/13 10/14/14	1.3* 0.93		1.0	2.0	Discharge of oil drilling wastes and from metal refineries; erosion of natural deposits
Copper (ppm) 1346 (sampled at well) 1331	06/26/13 10/14/14	0.065 ND		1.300	0.300	Erosion of natural deposits; leaching from wood preservatives
Lead (ppb) 1346 (sampled at well) 1331	06/26/13 10/14/14	0.98 ND		15.0	0.20	Discharges from industrial manufacturers; erosion of natural deposits
Chlordane (ppt) 1346 1331	06/26/13 10/14/14	ND 140*		100	30	Residue of banned insecticide

TABLE 5 – DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Chloride (ppm) 1346 1331	10/15/12 10/14/14	890* 910*		500		Runoff/leaching from natural deposits; seawater influence
Color (units) 1346 1331	09/30/13 10/14/14	35* 50*		15		Naturally-occurring organic materials
Copper (ppm) 1346 1331	10/15/12 10/14/14	0.065 ND		1.000		Erosion of natural deposits; leaching from wood preservatives
Iron (ppb) 1346 1331	09/30/13 10/14/14	2500* 190		300		Leaching from natural deposits; industrial wastes
Manganese (ppb) 1346 1331	09/30/13 10/14/14	2000* 2800*		50		Leaching from natural deposits
Odor (units) 1346 1331	10/15/12 10/14/14	2 4		3		Naturally-occurring organic materials
Sulfate (ppm) 1346 1331	10/15/12	11 22		500		Runoff/leaching from natural deposits; industrial wastes
Turbidity (units) 1346 1331	10/15/12 10/14/14	33* 5.1*		5		Soil runoff
Total dissolved solids (ppm) 1346 1331	10/15/12 10/14/14	1900* 1800*		1000		Runoff/leaching from natural deposits
Specific conductance (µS/cm) 1346 1331	10/15/12 10/14/14	3200* 3000*		1600		Substances that form ions when in water; seawater influence

TABLE 6 – DETECTION OF UNREGULATED CONTAMINANTS

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	Notification Level	Health Effects Language
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Boron	1346	11/22/09	0.16		1.0	The babies of some pregnant women who drink water containing boron in excess of the notification level may have an increased risk of developmental effects, based on studies in laboratory animals.
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*Any violation of an MCL, MRDL, or TT is asterisked. Additional information regarding the violation is provided later in this report.

Additional General Information on Drinking Water

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

Lead-Specific Language for Community Water Systems: If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. [INSERT NAME OF UTILITY] is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

Summary Information for Violation of a MCL, MRDL, AL, TT, or Monitoring and Reporting Requirement

VIOLATION OF A MCL, MRDL, AL, TT, OR MONITORING AND REPORTING REQUIREMENT				
Violation	Explanation	Duration	Actions Taken to Correct the Violation	Health Effects Language
Barium exceeded MCL level	Likely resulting from erosion of natural deposits	one sample	The MRWC has developed an alternate water source.	Some people who drink water containing barium in excess of the MCL over many years may experience an increase in blood pressure.
Chlordane exceeded MCL level	Likely resulting from contamination on the property at 1331 Milton Road	one sample	The MRWC has developed an alternate water source.	Some people who use water containing chlordane in excess of the MCL over many years may experience liver or nervous system problems, and may have an increased risk of getting cancer.

Chloride exceeded secondary MCL level	Seawater influence from the Napa River.	one sample	Secondary standards are in place to establish an acceptable aesthetic quality of the water, no action taken.	
Color exceeded secondary MCL level	Leaching of naturally-occurring organic materials	one samples	Secondary standards are in place to establish an acceptable aesthetic quality of the water, no action taken.	
Iron exceeded secondary MCL level	Leaching from natural deposits	one samples	Secondary standards are in place to establish an acceptable aesthetic quality of the water, although no action is required the MRWC is seeking a second source of water.	Iron was found at levels that exceed the secondary MCL of 300 ug/L. The iron MCL was set to protect you against unpleasant aesthetic effects (e.g., color, taste, and odor) and the staining of plumbing fixtures (e.g., tubs and sinks) and clothing while washing.
Manganese exceeded secondary MCL level	Leaching from natural deposits	one samples	Secondary standards are in place to establish an acceptable aesthetic quality of the water, although no action is required the MRWC is seeking a second source of water.	The notification level of 500 ppb for manganese is used to protect consumers from neurological effects. High levels of manganese in people have been shown to result in effects of the nervous system. See commentary in the Errata at the end of this report.
Turbidity exceeded secondary MCL level	Leaching from soil	one sample	Secondary standards are in place to establish an acceptable aesthetic quality of the water, no action taken.	Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the amount of leaching from the soil..
Total dissolved solids exceeded secondary MCL level	Leaching from natural deposits	one sample	Secondary standards are in place to establish an acceptable aesthetic quality of the water, no action taken.	
Specific conductance exceeded secondary MCL level	Seawater influence from the Napa River contributes dissolved ions	one sample	Secondary standards are in place to establish an acceptable aesthetic quality of the water, no action taken.	

For Water Systems Providing Ground Water as a Source of Drinking Water

**TABLE 7 – SAMPLING RESULTS SHOWING
FECAL INDICATOR-POSITIVE GROUND WATER SOURCE SAMPLES**

Microbiological Contaminants (complete if fecal-indicator detected)	Total No. of Detections	Sample Dates	MCL [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
<i>E. coli</i>	0		0	(0)	Human and animal fecal waste
Enterococci	0		TT	n/a	Human and animal fecal waste
Coliphage	0		TT	n/a	Human and animal fecal waste

**Summary Information for Fecal Indicator-Positive Ground Water Source Samples,
Uncorrected Significant Deficiencies, or Ground Water TT**

SPECIAL NOTICE OF FECAL INDICATOR-POSITIVE GROUND WATER SOURCE SAMPLE
No positive fecal indications were found in 2014.
SPECIAL NOTICE FOR UNCORRECTED SIGNIFICANT DEFICIENCIES
No significant deficiencies have been noted and communicated to MRWC by the state of California.

Summary Information for Operating Under a Variance or Exemption

No formal variance of exception is in place, however the MRWC is not in compliance with California
Title 22 §64573 which requires that water mains be at least four inches in diameter.

Errata

In the consumer confidence report for 2011 the contaminant levels for iron and manganese were erroneously reported as 2.6 ppb and 1.9 ppb. The correct values were 2600 ppb and 1900 ppb. It was erroneously stated that "Notification level is 500ppb. The notification level for manganese is used to protect consumers from neurological effects. High levels of manganese in people have been shown to result in effects of the nervous system. THIS DOES NOT APPLY TO THIS DETECTED LEVEL OF 1.9 ppb." This statement was incorrect: the manganese levels detected in the 11/23/2009 sample exceeded the notification level 500 ppb by a factor of four. In addition later samples from the 1346 and 1331 wells also indicated manganese levels exceeding the notification level by a factor of four (1346) and six (1331).

You may be at risk for neurological damage from long term consumption of water containing this level of manganese. The EPA has suggested an acute exposure level of 1000 ppb and a lifetime health advisory level of 300 ppb. See the EPA publication "Drinking Water Health Advisory for Manganese", EPA publication EPA-822-R-04-003, January, 2004 for more detailed information.

Additional commentary is available from the State of California Division of Drinking Water:

Manganese is a required nutrient. Table 2.1 in ATSDR (2008) has a table of adequate intake levels for manganese, which range from 1.2 mg/day for 1- to 3-year-old infants, to 1.8 -2.3 mg/day for female and male adults. Values are lower for infants and higher for the pregnant or lactating woman. A healthful diet provides adequate manganese for good nutrition (US EPA, 2003). Reviews of typical Western and vegetarian diets showed typical manganese intakes of 0.7 to 10.9 mg/day (WHO, 2004).

However, manganese at very high levels can pose a neurotoxic risk (ATSDR, 2008; US EPA, 1996, 2003, 2004; WHO, 2004). For example, neurologic damage (mental and emotional disturbances, as well as difficulty in moving—a syndrome of effects referred to as "manganism") has been reported to be permanent among manganese miners and other workers exposed to high levels of airborne manganese for long periods of time. Lower chronic exposures in the workplace resulted in decrements in certain motor skills, balance and coordination, as well as increased memory loss, anxiety, and sleeplessness (ATSDR, 2008). USEPA (1996), in developing an oral reference dose for manganese based on dietary intake, mentions an epidemiological study in Greece that showed an increase in neurologic effects such as weakness and fatigue, disturbances in gait, and neuromuscular effects, in people whose drinking water contained 1.6 to 2.3 mg/L. Uncertainties about the levels of dietary manganese and the amount of drinking water consumed did not enable USEPA to use these data for risk assessment purposes.

ATSDR (2008) reports several studies that showed decreased ability in neurobehavioral performance testing and in several educational parameters, in children exposed to high level of manganese in drinking water and diet for at least several years.

Children are considered to be particularly susceptible to possible effects of high levels of manganese exposure because they absorb and/or retain more manganese than adults (ATSDR, 2008; USEPA, 1996).

Attention to the potential health concerns of high levels of manganese in drinking water is appropriate, as the 0.5-mg/L notification level provides, given the possibility of neurologic effects at very high concentrations. Similar advisory levels for manganese have been established by the US EPA, which has a manganese health advisory level of 0.3 mg/L (USEPA, 2004), and the World Health Organization, which has a manganese health guideline level of 0.4 mg/L (WHO, 2004).
